

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A method to deliver across an access network a data stream requiring a bandwidth and a quality of service, said method comprising:

provisioning a plurality of virtual connections capable of meeting bandwidth and quality of service requirements between a user, among a plurality of users coupled to said access network, and an access server of said access network coupled to a content provider operable to deliver said data stream, wherein the provisioned virtual connections are specific to the user; and

requesting, by the user, said data stream from said content provider after said provisioning of the plurality of virtual connections to the user,

wherein after the user has requested said data stream from said content provider, and if the user lacks support for negotiating or acknowledging the bandwidth through said access network with said quality of service, said method further comprises:

identifying a virtual connection out of said plurality of provisioned virtual connections capable of guaranteeing said quality of service between said user and said access server;

checking whether said virtual connection can convey said bandwidth; and

according to the outcome of said checking whether said virtual connection can convey said bandwidth, allowing or disallowing said data stream to be delivered over said virtual connection to said user,

the method further comprising:

provisioning a virtual path across said access network, the bandwidth of which being determined from a traffic load expected from said plurality of users;
aggregating said plurality of virtual connections over said virtual path;
disabling any connection admission control means in said access network that may prevent the aggregating said plurality of virtual connections over said virtual path;
if said virtual connection conveys said bandwidth, checking additionally whether said virtual path conveys said bandwidth; and
according to the outcome of said additional checking step, allowing or disallowing said data stream to be delivered over said virtual connection to said user.

2. (previously presented): The method according to claim 1, further comprising:
if said virtual connection cannot convey said bandwidth, checking additionally whether said access network can accommodate said bandwidth between said user and said access server along said virtual connection; and
according to the outcome of said additional checking:
adapting the capacity of said virtual connection for it to convey said bandwidth and allowing said data stream to be delivered to said user,
or disallowing said data stream to be delivered to said user .

3. (canceled).

4. (currently amended): A method according to claim 1, further comprising:

provisioning a virtual path across said access network, the bandwidth of which being determined from a traffic load expected from said plurality of users;

if said virtual connection can convey said bandwidth, checking additionally whether said virtual path can convey said bandwidth; and

according to the outcome of said additional checking;

connecting said virtual connection to said virtual path and allowing said data stream to be delivered to said user,

or disallowing said data stream to be delivered to said user.

5. (currently amended): The method according to claim [[3]]1, wherein the bandwidth of said virtual path is determined according to a statistical traffic law, given a number of virtual connections multiplexed over said virtual path, a traffic load per user and a service deny probability.

6. (currently amended): The method according to claim [[3]]1, wherein the number of virtual connections multiplexed over said virtual path is determined according to a statistical traffic law, given a bandwidth of said virtual path, a traffic load per user and a service deny probability.

7. (currently amended): An access network operable to convey a data stream requiring a bandwidth and a quality of service, said access network comprising;
an access server coupled to a content provider operable to deliver said data stream;

administration means for provisioning a plurality of virtual connections capable of meeting bandwidth and quality of service requirements between a user, among a plurality of users coupled to said access network, and the access server, wherein the provisioned virtual connections are specific to the user; and

access resource control means for, after the user has requested said data stream from said content provider, and if said user lacks support for negotiating or acknowledging through said access network said bandwidth with said quality of service,

identifying a virtual connection out of said plurality of provisioned virtual connections capable of guaranteeing said quality of service between said user and said access server,

checking whether said virtual connection can convey said bandwidth,

according to the outcome of said check, allowing or disallowing said data stream to be delivered over said virtual connection to said user,

wherein said administration means provisions the plurality of virtual connections to the user before said user requests the data stream, and

wherein said administration means:

provisions a virtual path across said access network, the bandwidth of which being determined from a traffic load expected from said plurality of users;

aggregates said plurality of virtual connections over said virtual path; and

disables any connection admission control means in said access network that may prevent from aggregating said plurality of virtual connections over said virtual path,

and wherein said access resource control means :

if said virtual connection conveys said bandwidth, checks additionally whether said virtual path conveys said bandwidth,

according to the outcome of said additional check, allows or disallows said data stream to be delivered to said user.

8. (previously presented): The access network according to claim 7, wherein said access resource control means are coupled to said administration means, wherein said administration means adapts the capacity of said virtual connection, and wherein said access resource control means :

if said virtual connection cannot convey said bandwidth, checks additionally whether said access network can accommodate said bandwidth between said user and said access server; and

according to the outcome of said additional check:

triggers said administration means to adapt the capacity of said virtual connection for it to convey said bandwidth and allow said data stream to be delivered over said virtual connection to said user, or

disallows said data stream to be delivered to said user.

9. (canceled).

10. (currently amended): The access network according to claim 7, wherein said access resource control means are coupled to said administration means, and said administration means :

~~provisions a virtual path across said access network, the bandwidth of which being determined from a traffic load expected from said plurality of users; and~~

connects said virtual connections to said virtual path,

and wherein said access resource control means:

if said virtual connection can convey said bandwidth, checks additionally whether said virtual path can convey said bandwidth; and

according to the outcome of said additional checking step:

triggers said administration means to connect said virtual connection to said virtual path and allow said data stream to be delivered to said user, or
disallows said data stream to be delivered to said user.